ACC NR: AP7005731

Concentration are described by an equation of linear recombination. Orig. art. has: 6 figures, 8 formulas, and 1 table. [Authors' abstract] [WA-095] [NT]

SUB CODE: 20/SUBM DATE: 18Jun65/ORIG REF: 014/OTH REF: 002/

Card 2/2

S/139/62/000/006/021/032
E194/E155

AUTHORS: Vorozhtsov, B.I., Potakhova, G.I., and Nesterov, V.M.

TITLE: Dielectric properties of insulating materials during gamma radiation. III. Plastic АГ-4 (AG-4)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, no.6, 1962, 143-146

TEXT: Until recently, plastic grade AG-4, which is based on phenol-formaldehyde, was considered one of the few heat-resistant moulded materials suitable for casings for capacitors, transformers, relays etc. operating at temperatures of +200 °C. It is becoming increasingly necessary to test such electrical and radio materials environmentally. The present work describes the study of the permittivity, tan δ, breakdown stress and resistivity of plastic grade AG-4 under gamma radiation from Co^{60}, at a dosage rate of 670 rads/min with total dosages up to 10^5 rads, at various temperatures between -60 and +200 °C, in the frequency range 30 - 10^5 c/s. The permittivity changed less than 10%. A dosage of 2000 rads/min and a total dose of up to 4×10^5 rads/min had no effect on the electric strength at 50 c/s. The tan δ changed

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VODOP'YANOV, K.A.; VOZHDOZHTSOV, B.I.; LAVROV, M.D.; NESMELOVA, Ye.S.; POTAKHOVA, G.I.

Effect of radiation on the dielectric properties of electric insulating materials. Atom. energ. 9 no.6:498-500 D '60. (MIRA 13:12)
(Gamma rays) (Dielectrics)

VODOP'YANOV, K.A.; VOROZHTSOV, B.I.; POTAKHOVA, G.I.

Effect of gamma radiation on the dielectric properties of some electric insulation materials. Part 2. Phenol formaldehyde plastics. Izv.vys.uchob.zav.; fiz. no.3:133-137 '60. (MIRA 13:7)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete im. V.V.Kuybysheva.
(Gamma rays) (Electric insulators ans insulation)

VODOP'YANOV, K.A., doktor tekhn.nauk, prof.; VOROZHTSOV, B.I., kand. fiz.-matem.nauk, dotsent; POTAKHOVA, G.I., kand.fiz.-matem. nauk; OLSHANSKAYA, N.I., inzh.

Electric and physical properties of electric insulation materials subjected to radiation. Elektrichestvo no.5:60-66 My '60. (MIRA 13:9)

1. Sibirskiy fiziko-teknicheskiy institut pri Tomskom Gosudarstvennom universitete.
(Electric insulators and insulation)
(Materials, Effect of radiation on)

NESTEROV, V.M.; NESMELOVA, Ye.S.; OL'SHANSKAYA, N.I.; MIKHAYLOVA, T.G.; POTAKHOVA, G.I.

Reversible radiation-electrical effects in dielectrics.
Fiz. tver. tela 4 no.11:3010-3017 N '62. (MIRA 15:12)

1. Tomskiy gosudarstvennyy universitet.
(Dielectrics, Effect of radiation on)

POTAKHOVA, G.I.; VOROZHTSOV, B.I.; FILATOV, I.S.

Dielectric properties of insulating materials due to gamma radiation. Part 4: The epoxy compound ED-6. Izv. vys. ucheb. zav; fiz. no.1:155-159 '63. (MIRA 16:5)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni Kuybysheva.
(Dielectrics, Effect of radiation on) (Resinous products)

L 10734-63 EPR/EWT(l)/EWT(m)/EWP(q)/ES(s)-2/EDS AFFTC/ASD/APGC/SSD
Ps-4/Pt-4/Pq-4/Pi-4 WW/WH/IJP(C)

ACCESSION NR: AP3004038 S/0139/63/000/003/0071/0075

79
78

AUTHOR: Potakhova, G. I.

TITLE: Dielectric losses in quartz during x-ray irradiation

SOURCE: IVUZ. Fizika, no. 3, 1963, 71-75

TOPIC TAGS: dielectric losses

ABSTRACT: The effect of x-ray irradiation on the dielectric losses in monocrystalline, fused, and microcrystalline quartz was investigated. It was found that the loss angle tan δ in monocrystalline quartz increases during x-ray irradiation; the increase is greatest at the lowest frequencies of the external electric field. Tan δ returns to normal after irradiation. A similar increase (about 1.5 times as great) was observed in microcrystalline quartz. Tan δ is much smaller in fused than in crystalline quartz and increases only slightly during x-ray irradiation. The following conclusions were reached: 1) At fixed frequencies, tan δ depends only on the intensity of x-ray irradiation. The increase in tan δ in the three types of quartz under x-ray irradiation are caused by increases in conductivity. 3) Quartz cannot be regarded as a filler

Card 1/2

L 10734-63
ACCESSION NR: AP3004038

which increases stability of a material against x-ray irradiation. Orig. art. has: 4 figures and 1 table.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete imeni V. V. Kuyby*sheva (Siberian Physicotechnical Institute, Tomsk State University)

SUBMITTED: 12Dec61 DATE ACQ: 15Aug63 ENCL: 00

SUB CODE: PH NO REF SOV: 012 OTHER: 006

Card 2/2

increasing temperature. Irradiation has little effect on the above relation and on the magnitude of tan δ. These differences were calculated when irradiating with an intensity of 670 r/min. The electric breakdown of pure ED-6 showed that when the irradiating dose is of the order of 2400 r/min there is no change in the breakdown values. ED-6 with quartz filler when exposed to gamma irradiation showed a change in tan δ which was most effective at low frequencies and decreased with increasing frequencies and temperatures. Experiments carried out in vacuo showed that the latter phenomena are due to the intrinsic changes within the sample itself and not a result of secondary phenomena. It was found that the discrepancies in tan δ between theoretical and experimental values increase with frequency; the calculated values after irradiation were of the order 2.8×10^{-6} while the experimental values were 1.6×10^{-2}. It was concluded that the effect of gamma irradiation for dose levels up to 650 r/min in the region of low frequencies leads to the increase of tan δ in quartz filled ED-6. This effect decreases with increasing frequency of the electric field and temperature of the sample. The value of

tan δ in the quartz filled compound at a fixed frequency was determined by the intensity of the irradiating dose. It was also found that the specific volume resistivity of ED-6 decreases with the gamma irradiation. Finally, it was shown that in materials with a quartz filler the increase of tan δ during irradiation is due to the quartz. There are 5 figures and 2 tables.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete imeni V.V.Kuybysheva (Siberian Physico-technical Institute at Tomsk State University imeni V.V.Kuybyshev)

SUBMITTED: November 30, 1961

246820

80154
S/105/60/000/05/14/028
B007/B008

AUTHORS: Vodop'yanov, K.A., Professor, Doctor of Technical Sciences, Vorozhtsov, B.I., Docent, Candidate of Physical and Mathematical Sciences, Potakhova, G.I., Candidate of Physical and Mathematical Sciences, Ol'shanskaya, N.I., Engineer

TITLE: The Electrical and Physical Properties of Technical Electric Insulation Materials When Subjected to Radioactive Irradiation

PERIODICAL: Elektrichestvo, 1960, No. 5, pp. 60-66

TEXT: Experimental data are given in the paper under review. The influence of gamma radiation on the electrical and physical characteristics of highly polymeric dielectrics, siliconorganic and phenol formaldehyde synthetic materials. Irradiation was carried out with a betatron (design by the Tomskiy politekhnicheskiy institut (Tomsk Polytechnic Institute)) with an energy of the gamma rays of 15 Mev and a dosage rate of 300-1200 r/min. The samples were irradiated at various temperatures (-60, +20, +60°C) and at tropical humidity (+40°C and relative humidity of the air of 98%). The following was determined on the basis of these experiments described here in detail. High-polymer dielectrics of the

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The Electrical and Physical Properties of Technical Electric Insulation Materials When Subjected to Radioactive Irradiation

80154
S/105/60/000/05/14/028
B007/B006

polyethylene-, "Fluoroplast"-, and polystyrene type do not change the mechanism of the dielectric losses and the polarization at an irradiation with gamma rays of a dosage of up to 10^6 at room temperature. The absolute values of the dielectric constants, of the loss angle, and the electric strength remain unchanged. An increase of the electrical conductivity is observed in polyethylene on low-temperature irradiation, and a reduction on irradiation under tropical conditions. In the case of the "Steklotekstolit SKM-1" (organosilicon synthetic material), the greatest changes occur as a result of low-temperature irradiation and at tropical humidity. The loss angle and the dielectric constant change most in consequence of the irradiation in the range of low frequencies. The electrical conductivity and the ohmic part of the dielectric losses increase in organosilicon rubber after irradiation. An irradiation of raw rubber with gamma rays accelerates the vulcanizing process. An increase of the losses is observed at an irradiation with gamma rays of the phenol formaldehyde synthetic materials. The loss angle changes most after an irradiation at low temperatures and under tropical conditions. The dielectric constant and the electric strength of these synthetic materials do not change after an

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Card 2/3

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342630009-3"

POTAKHOVA, G.I.

Dielectric loss in quartz exposed to X rays. Izv.vys.ucheb.zav.; fiz. no.3:71-75 '63. (MIRA 16:12)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni Kuybysheva.

POTAKHOVA, G.I.

Dielectric losses in solid solutions of alkali halide crystals at high frequencies. Izv. TPI 95:278-286 '58. (MIRA 14:9)

1. Predstavleno chlenom-korrespondentom AN SSSR V.D.Kuznetsovym.
(Dielectric loss) (Solutions, Solid)
(Alkali metal halide crystals--Electric properties)

POTAKHOVA, G.I.

Dielectric losses in crystals containing nonisomorphous impurities in the range of high frequencies. Izv. TPI 95:287-294 '58.
(MIRA 14:9)

1. Predstavleno chlenom-korrespondentom AN SSSR V.D.Kuznetsovym.
(Dielectric loss) (Crystal lattices)

POTAKHOVA, G. I., Cand of Phys-Math Sci -- (diss) "Dielectrical loses in alkyl halide crystals at high frequencies." Tomsk, 1957, 10 pp (Tomsk State University im V. V. Kuybyshev), 100 copies

(KL, 34-57, 89)

L 01245-67 EWT(1)/EWT(m)/EWP(e) IJP(c) GG/WH

ACC NR: AP6032548 SOURCE CODE: UR/0139/66/000/004/0110/0113

AUTHOR: Potakhova, G. I.

ORG: Siberian Physicotechnical Institute im. V. D. Kuznetsov (Sibirskiy fiziko-tekhnicheskiy institut)

TITLE: Effect of gamma radiation on the dielectric characteristics of quartz

SOURCE: IVUZ. Fizika, no. 4, 1966, 110-113

TOPIC TAGS: quartz, dielectric, gamma radiation, ~~effect, quartz dielectric characteristic~~, x-ray radiation effect, ~~irradiated~~ quartz, ~~characteristic~~, nuclear radiation ~~effect~~

ABSTRACT: An experimental investigation was made of the effects of gamma radiation on the dielectric losses and polarization in single-crystal and fused specimens of quartz. Conductivity was measured simultaneously with the dielectric loss angle to establish the role of the former in the mechanism of dielectric losses. The measurements were conducted in the $40—10^4$ cps frequency range at room temperature and at pressure below 10^{-3} mm Hg to avoid the distorting effects of ionized air. Various intensities of gamma-radiation were supplied from a Co^{60} source. In single-crystal specimens, gamma-radiation caused a considerable increase with time in the loss angle which was accompanied by a decrease of permittivity. The change in capacitance was less than the change in the loss angle, changes in the latter being

Card 1/2

L 01245-67

ACC NR: AP6032548

more pronounced at lower frequencies of the electric field. Following irradiation, both the capacitance and the loss angle decreased. Seventeen hours after irradiation, the loss angle had not yet returned to its original value. The sustained value of the loss angle tangent was proportional to the square root of the radiation intensity, with a coefficient depending on the properties of the crystal specimen. This coefficient was considerably less for single crystals of natural quartz which, in addition, did not display any change in permittivity. The effects of gamma-radiation on quartz characteristics were in general analogous to those observed under x-ray radiation, except for the increased capacitance, which does not occur in the case of x-rays. For identical specimens, the loss angle changes were higher in the case of gamma radiation than for x-ray radiation. Simultaneous conductivity measurements showed the effect to be greater in single crystals than in fused specimens, but not to the extent of explaining the increase in the loss angle in single crystals. The character of the relaxation curves of the capacitance and loss angle confirmed the existence of a polarization process. In fused specimens, only the steady-current value was affected by radiation. Generally, gamma-radiation brought about changes in the loss angle, the permittivity, and the establishment of the steady-state current in quartz single crystals, which phenomena can be explained by the polarization of trapped electrons. In fused quartz, none of these effects was observed. Orig. art. has: 5 figures, 1 table, and 2 formulas. [FP]

SUB CODE: 20/ SUBM DATE: 17Dec64/ ORIG REF: 009/ OTH REF: 002/ ATD PRESS: 5097 18/

Card 2/2 hs

ACCESSION NR: AP4043379 S/0181/64/006/008/2510/2514

AUTHORS: Bryukhatov, N. L.; Pakhomova, N. L.; Potakova, V. A.

TITLE: On the effect of thermomagnetic working on the anisotropy and electric resistivity of iron-nickel ferrites

SOURCE: Fizika tverdogo tela, v. 6, no. 8, 1964, 2510-2514

TOPIC TAGS: magnetic anisotropy, ferrite material, electric resistivity, orientation, metalworking

ABSTRACT: In order to ascertain which ions participate in the production of the preferred orientation in thermomagnetic working of iron-nickel ferrites with a small excess of iron, the authors investigated single-crystal and polycrystalline samples for anisotropy and electric resistivity. The investigations reported to date do not indicate the mechanism whereby induced uniaxial magnetic anisotropy is produced by thermomagnetic working. The methods of

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producing the samples and their compositions are described. The magnetic crystalline and induced anisotropies were investigated by a torque method, and the electric resistivity was measured by a two-probe compensation method. The results show that during the course of the thermomagnetic working of the ferrites pairs of magnetically-interacting ions become oriented along the tetragonal axis of the spinel lattice, and this results in the induced magnetic anisotropy and in a reduction of the electric resistivity. The induced anisotropy increases with the increasing content of Fe^{2+} ions. The main role in the orientation process is played by the Fe^{2+} ions, since the orientation produced by diffusion of the ions. The electric resistance tests show that samples which do not have many ions of Fe^{2+} do not respond to thermomagnetic working. When these ions are present, the thermomagnetic working reduces the electric resistivity. The change in electric resistivity is thus also connected with the ordering of the Fe^{2+} ions. Orig. art. has: 3 figures, 3 formulas, and 3 tables.

ACCESSION NR: AP4043379

ASSOCIATION: Moskovskiy institut inzhenerov zheleznodorozhnogo transporta (Moscow Institute of Railway Transport Engineers)

SUBMITTED: 23Dec63 ENCL: 00

SUB CODE: SS NR REF SOV: 001 OTHER: 007

Card 3/3

BRYUKHATOV, N.L.; PAKHOMOVA, N.L.; POTAKOVA, V.A.

Effect of thermomagnetic treatment on the anizotropy and electric resistance of iron-nickel ferrites. Fiz. tver. tela 6 no.8:2510-2514 Ag '64. (MIRA 17:11)

1. Moskovskiy institut inzhenerov zheleznodorozhnogo transporta.

POTAPOVEV, Ya. G.

"Food and Feeding Interrelationships of the Plankton-Eating Fish of Lake Baykal."
Cand Biol Sci, Irkutsk U. Irkutsk, 1954. (RZhBiol, No 1, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (13) SO: Sum. 598, 29 Jul 55

L 46177-66 EWT(1) GG

ACC NR: AP6028625 SOURCE CODE: UR/0057/66/036/008/1492/1498

AUTHOR: Vorob'yev,P.A.; Mesyats,G.A.; Potalitsyn,Yu.F. 47

ORG: Tomsk Polytechnic Institute im. S.M.Kirov (Tomskiy politekhnicheskiy institut)

TITLE: A new high-power controlled nanosecond switch 25

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 8, 1966, 1492 1498

TOPIC TAGS: electric switch, high power switch, spark gap, nanosecond pulse

ABSTRACT: The authors describe a fast high-power switch based on the rapid successive breakdown of a large number (15 or 30) of series-connected short 200 micron gaps between coaxial cylindrical electrodes by capacitive coupling to a single cylindrical trigger electrode coaxial with them. The operation of the device is analyzed in terms of a simple equivalent circuit of which the principal parameters are the capacities between successive gap electrodes, between a gap electrode and the trigger electrode, and between a gap electrode and ground. Four switches were constructed and tested, and the results obtained with two of them are presented. In each of the instruments the 8 mm long, 28 mm diameter gap electrodes were mounted on a hollow cylindrical insulator which enclosed the cylindrical trigger electrode. The gap potentials during the waiting period were equalized by connecting the electrodes to a high resistance voltage divider. The switch chamber was filled with argon at from 1 to 6 atmospheres. In the tests the working voltage was varied from 4 to 40 kV, and in most of the tests

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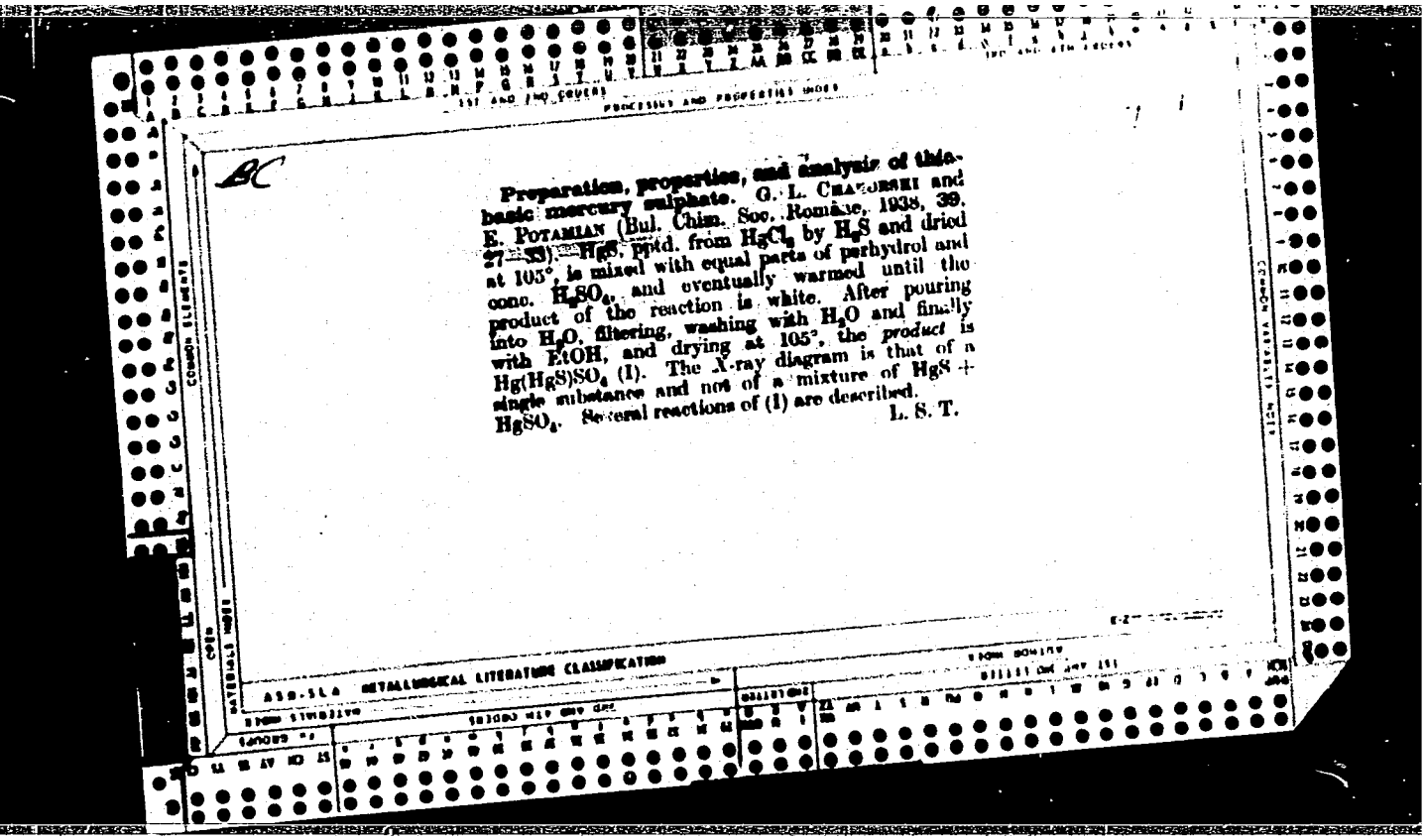
the switch was triggered with a 5 to 10 kV 100 to 200 nanosec pulse with a rise time of 2 nanosec. In one series, a 7 kV 300 nanosec trigger pulse with a 20 nanosec rise time was used. The rise times of the output pulses ranged from 1 to 2.8 nanosec. The delay between trigger and output pulses ranged from 11 to 136 nanosec, and the dispersion of this delay ranged from 2 to 108 nanosec. Under most conditions the delay was between 15 and 30 nanosec and its dispersion was between 5 and 20 nanosec. The delay, and particularly its dispersion, decreased rapidly with increasing working voltage, and at 40 kV, the delay dispersion for the 30 gap switch was only 2 nanosec. Advantages of the switch are the lack of connection between the trigger and controlled circuits, the low gas pressure required, the stability of the delay time, and the wide range of working voltages. The authors thank B.M.Koval'chuk for his creative participation in the work from its initial stages. Orig. art. has: 7 formulas, 5 figures and 1 table. [15]

SUB CODE: 09,20 / SUBM DATE: 16Aug65 ORIG.REF: 007

POTALOVSKII, N.S.,
KH. L. TSEITLIN, Russ. 51,616 Aug. 31, 1937



Preparation, properties, and analysis of thio-basic mercury sulphate. G. L. CHIAROTTI and E. POTAMIAN (Bul. Chim. Soc. Romane, 1938, 39, 27—38). HgS, pptd. from $HgCl_2$ by H_2S and dried at 105°, is mixed with equal parts of perhydrol and conc. H_2SO_4, and eventually warmed until the product of the reaction is white. After pouring into H_2O, filtering, washing with H_2O and finally with EtOH, and drying at 105°, the *product* is $Hg(HgS)SO_4$ (I). The X-ray diagram is that of a single substance and not of a mixture of HgS + $HgSO_4$. Several reactions of (I) are described.

L. S. T.

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

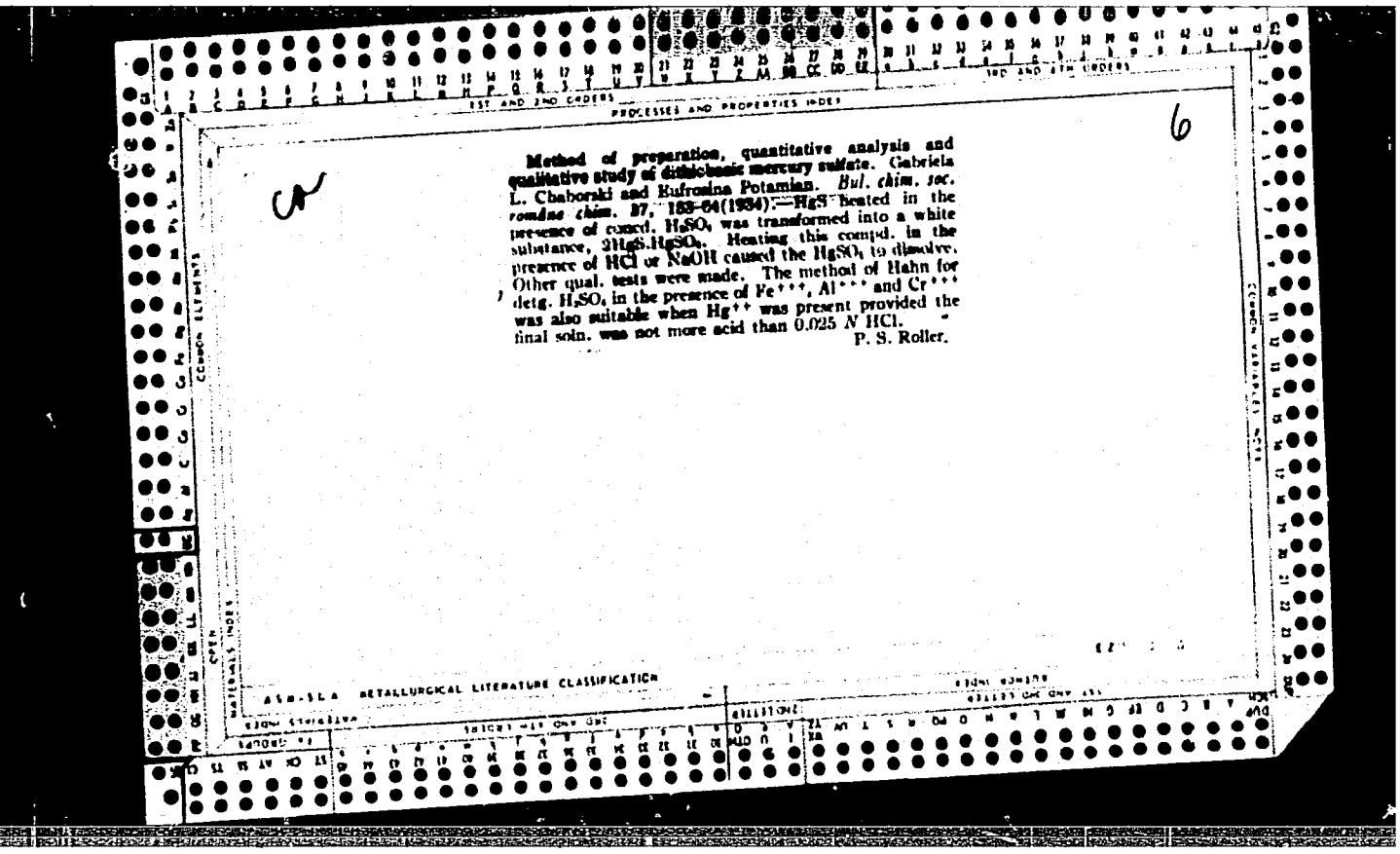
BC

a-1

Preparation, analysis, and qualitative study of $HgSO_4 \cdot 2HgS$. G. L. [illegible] and [illegible] (Bul. Chim. Soc. Română, [illegible], 37, 159—164).—Digestion of HgS with conc. H_2SO_4 at 145° affords white [illegible] after washing and drying at 150°. Alkalis [illegible] the SO_4, halogen acids convert it into yellow compounds which redden on heating, and $BaCl_2$ gives a mixture of HgS and $BaSO_4$. Methods of analysis are described.

A. R. P.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Method of preparation, quantitative analysis and qualitative study of dithiobasic mercury sulfate. Gabriela L. Chaborski and Eufrosina Potamian. *Bul. chim. soc. romîne chim.* **37**, 183–64(1934).—HgS heated in the presence of concd. H_2SO_4 was transformed into a white substance, $2HgS.HgSO_4$. Heating this compd. in the presence of HCl or NaOH caused the $HgSO_4$ to dissolve. Other qual. tests were made. The method of Hahn for detg. H_2SO_4 in the presence of Fe^{+++}, Al^{+++} and Cr^{+++} was also suitable when Hg^{++} was present provided the final soln. was not more acid than 0.025 *N* HCl.
P. S. Roller.

USSR/Plant Diseases. Diseases of Forest Species 0-2

Abs Jour : Ref Zhur - Biol., No 20, 1958, No 91938

Author : Potalaychuk V.I.
Inst : All-Union Institute of Plant Protection
Title : On the Biology of the Agent Causing Oak Desiccation

Orig Pub : Tr. Vses. in-ta zashchity rast., 1957, vyp. 8, 227-237

Abstract : This study covers the cultural and morphological characteristics of fungi of the genus Ophiostoma considered to be the agent of oak wilt and of Ceratostomella which produces desiccation in the elm. It was established that the agents of both diseases can cross under different geographical conditions from one feeding host to another (oak, elm). Their ability to produce different types of sporulation (Q. raphium, Cephalosporium, Hyalodendron, Rhinotrichum) and their variability were noted. In this connection the independence of the genera Ophiostoma and Ceratostomella is lost. Noting the similarity in the cultural-morphological characteristics,

Card : 1/2

S/139/60/000/03/024/045
E073/E335

AUTHORS: Vodop'yanov, K.A., Vorozhtsov, B.I. and Potakhova, G.I.

TITLE: Influence of Gamma-irradiation on the Dielectric Properties of Some Electrical Insulation Materials. Part II. Phenolformaldehyde Plastics

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, No 3, pp 133 - 137 (USSR)

ABSTRACT: The dielectric constant, the dielectric loss angle and the electric strength of a number of phenolformaldehyde plastics were measured before and after gamma-irradiation with doses of 30 000 - 100 000 roentgen and with intensities of 500-530 R/m. After irradiation, the greatest changes in the loss angle were observed at -60 °C and under tropical conditions. The relaxation component of the losses in the investigated materials after irradiation showed hardly any change. No change was observed in the dielectric constant of the investigated materials as a result of the gamma-irradiation. The electric strength of phenolformaldehyde plastics showed hardly any change as a result of the gamma-irradiation.

V B

Card1/2

5(2)

69349

R/003/60/011/04/034/041
D0015/D3001

5.2400

AUTHORS: Bărcănescu, V., and Potamian, E.

TITLE: Colorimetric Determination of Antimony in Silicon for Semiconductors

PERIODICAL: Revista de Chimie, 1960, Vol 11, Nr 4, pp 240-241

ABSTRACT: The article contains a communication presented to the meeting on "Methods of Analysis for the Titration of Rare and Dispersed Elements", held by the Comisia de Chimie Analitică a Secţiei de Chimie din Consiliul Central ASIT (Analytical Chemistry Commission of the Chemistry Section at the ASIT Central Council) from 21-22 December 1959. The radio-chemical and colorimetric methods for determining antimony, as an impurity in semiconductors, have the highest sensitivity. The accuracy of the colorimetric method is satisfactory enough for a 10^{-5}% Sb content. L.N. Lepin and V.O. Ghein pointed out that brilliant green

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69349

R/003/60/011/04/034/041
D0015/D3001

Colorimetric Determination of Antimony in Silicon for Semiconductors

may be used as the dyestuff in this analysis. It was also employed by the authors who chose it for sensitivity, easiness and rapidity of titration of Sb in residues of Si with hydrofluoric and nitric acid. The silicon sample passes into a solution with the aid of a HNO_3 + HF mixture of acids. Upon removal of SiF_4 and of the excess of acids, the residue, by repeated evaporations, passes into a hydrochloric solution. Tests with various quantities of standard solutions showed that there is no loss of antimony by this process. The residue, which passed into the hydrochloric solution, oxidized with a solution of sodium nitrite to Sb^{5+}. The results of a great number of sample tests showed the possibility of

Card 2/3

BARCANESCU, V.; POTAMIAN, E.

Rapid analysis of silicates. Rev. chimie Min petr 12 no.11:670-673 N '61.

POTAMIAN, E.

RUMANIA / Analytical Chemistry. Analysis of Inorganic Substances. E

Abs Jour: Ref Zhur-Khimiya, No 4, 1959, 11506.

Author : Barcanescu, V., Potamian, E., Bartos, V.
Inst : Not given.
Title : Determination of Impurities in Industrial Selenium.

Orig Pub: Rev. chim., 1958, 9, No 6, 307-310.

Abstract: For the separation and determination of impurities, contained in selenium, a method is proposed, which does not require a preliminary separation of Se by calcination and, consequently, prevents doing damage to the Pt crucibles and also prevents evaporation of the oxides of some impurities. A specimen of Se (5-10 g) is evapor-

Card 1/4

RUMANIA / Analytical Chemistry. Analysis of Inorganic Substances. E

Abs Jour: Ref Zhur-Khimiya, No 4, 1959, 11506.

Abstract: are evaporated to dryness, treated with a solution of HCl, and the residue of AgCl is filtered off. The solution, after the AgCl separation, is condensed by boiling, treated with a solution of HCl and solid $NH_2OH.HCl$ (for the reduction of the remaining portion of Se), and the remaining portion of Se, which interferes with the subsequent determination of Cu and Pb, is filtered off. In the resulting filtrate, Pb is precipitated by sulphuric acid and determined as $PbCrO_4$, and in the filtrate, after the separation of $PbSO_4$, Fe^{3+}, Al^{3+} and Bi^{3+} are precipitated with the aid of NH_4OH and NH_4Cl. In subsequent operations, the sesquioxides are determined by precipitation

Card 3/4

L 41546-65 EWT(1)/EED-2 RM/WW/64/015/009/0561/0564 12 B

ACCESSION NR: AP5012411

AUTHOR: Parcanescu, V.; Potamian, Eufrosina; Calugareanu, Sofia

TITLE: Complexometric-chromatographic analysis of ferrites 21

SOURCE: Revista de chimie, v. 15, no. 9, 1964, 561-564

TOPIC TAGS: iron compound, manganese compound, zinc compound, nickel compound, chromatographic analysis

Abstract [Authors' English summary modified]: The authors describe methods for the complexometric-chromatographic determination of the elements Fe, Mn, Mg, and Zn in manganese-zinc ferrites and of the elements Fe, Ni, Co, and Zn in nickel-zinc ferrites. The methods presented are easier and more rapid than the standard ones and give reproducible results. Orig. art. has 1 figure and 2 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MM, GC

NO REF SOV: 002 OTHER: 025 JPRS

Card 1/1

BARCANESCU, V.; POTAMIAN, Eufrosina; CALUGAREANU, Sofia

Complexometric and chromatographic analysis of ferrites.
Rev chimie Min petr 15 no.9:561-564 S '64.

L 04778-67 EWT(m)/EWP(w)/EWP(t)/ETI IJP(c) JD/DJ
ACC NR: AP6023451 SOURCE CODE: UR/0369/66/002/003/0363/0364 57 55

AUTHOR: Potamoshnev, A. P. (Kiev); Kravchenko, V. G. (Kiev); Belolipetskiy, A. Ya. (Kiev)

ORG: none

TITLE: Features of the performance of metal-powder friction materials under conditions of dry and liquid friction

SOURCE: Fiziko-khimicheskaya mekhanika materialov, v. 2, no. 3, 1966, 363-364

TOPIC TAGS: steel, alloy, powder metal, metal friction, friction coefficient, friction loss / 45 steel, D16T alloy

ABSTRACT: A major problem in the development of hoisting-transporting devices is the selection of friction couples, which perform under extremely difficult and rigorous conditions. This problem is complicated by the need to reduce dimensions to a minimum. In this connection, the authors investigated the possibility of developing materials for friction couples of this kind, operating under conditions of dry and liquid friction as elements of a freight-transporting monorail-type mechanism. The tests were carried out in a special rig on using rollers of 45 mm diameter with a rotational speed of 100 r.p.m. During the tests the system was gradu-

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ally loaded until its rated load was reached, and the cohesive force and friction coefficients were determined for various loads in various media. Rollers made of steel 45, alloy D16T and metal-powder friction materials were tested, and this last type of rollers was found to display the highest cohesive strength and to perform satisfactorily under load pressures $p \leq 40$ kg/cm^2. The composition of the metal-powder material was: 74% Cu, 9% Sn, 5% Pb, 4% Fe, 5% graphite, 3% sand. For this material the friction coefficient (optimal extent: 0.3-0.5) is a variable which depends on the load and lubricant, as illustrated in Fig. 1 which shows

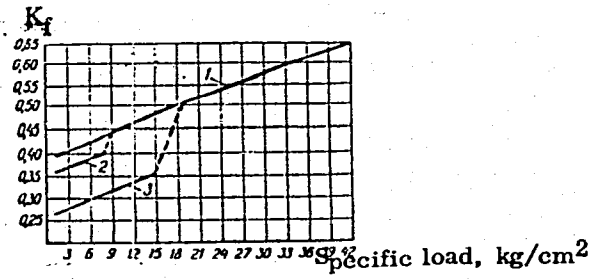

Fig. 1. Variation in the friction coefficients of powder-metal rollers on a monorail of D16T alloy as a function of specific load: 1 - dry friction; 2 - friction with introduction of water into zone of contact; 3 - friction on lubrication with spindle oil

that in the presence of both dry friction and liquid friction an increase in specific load p causes an increase in the friction coefficient. Fig. 2 shows the rollers of a hoisting-transporting device after 20 hours of test-rig operation at $p = 35$ kg/cm^2. It must be assumed that

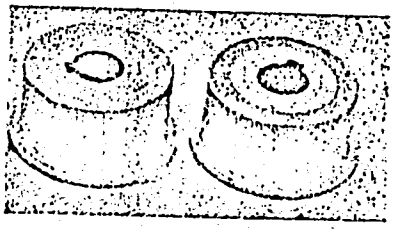

Fig. 2. Powder-metal rollers following 20 hr of operation under unit pressure $p = 35$ kg/cm^2

a rise in load leads to the disintegration of the lubricant film, since the friction coefficients at lubrication with water in the presence of $p > 8$ kg/cm^2, as well as at lubrication with spindle oil in the presence of $p > 15$ kg/cm^2 are nearly the same as in the absence of these lubricants. These experimental findings have made it possible to design a hoisting-transporting mechanism with satisfactory operating characteristics. Orig. art. has: 2 figures, 1 formular.

SUB CODE: 11, 13, 20/ SUBM DATE: 18Jan66/ ORIG REF: 001

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BC

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POTANIN, D. N.

13096

USSR/Heads of Manufacturing Industries 25 Dec 1947
7317.

Legislation 3122.0400

"159. Concerning the Relieving of Comrade D. N. Potanin from Duties as Vice-minister of the Construction Materials Industry of the USSR" ½ p

"Sob Post Sovmin" No 10

Relieves Potanin as Vice-minister of Construction Materials Industry of USSR in connection with his transfer to other work. Decree No 3332, 23 Sep 1947, complete.

LC

13096

AUTHORS: Potanin, D. N., Vladimirskiy, V. K. 72-58-5-3/18

TITLE: Glass for Housing and Industrial Purposes (Steklo v zhilishchnom i promyshlennom stroitel'stve)

PERIODICAL: Steklo i Keramika, 1958, 15 Nr 5, pp 7-12 (USSR)

ABSTRACT: At present Soviet industry produces annually 130 million m^2 of window glass, 1 million m^2 of reinforced glass, 1.25 million m^2 of ornate glass, and 2,4 million m^2 of polished glass. In the current year 2 new large glass factories are to be put into operation: the Saratov factory for polished glass, reinforced glass and ornate glass of great dimensions (up to 4.5 x 3.2 m) and a factory for window glass in the Far East. After the enlargement of the Ulan-Ude and Anzhero-Sudzhensk glass factories as well as after the building of a factory at Kazakhstan, the regions of Siberia, the Far East and Kazakhstan will be supplied with window glass of their own production. The demand for glass is, however, still greater than its output and will further increase with the building of apartments. The lack of window glass is partly also caused by wrong use in building, which is described in detail. Besides window glass many building materials and products made of glass are used at present:

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Glass for Housing and Industrial Purposes

72-58-5-3/18

1. Products of glass fiber, as heat and sound insulation materials in the form of sheets and mats; In the last years the production of blown glass fibers started and this caused a considerable drop of price.
2. Glass plastics, on the basis of synthetic resins and glass fiber, in form of yarns, mats and fabrics.
Some of its physico-mechanical properties are mentioned in a table as compared to structural steel and aluminum. They are light and solid, they are neither subject to putrefaction nor to corrosion, and they are not hygroscopic. Experiments of the State Scientific Research Institute for Coal as well as of the Laboratory for Anisotropic Structures of the AS USSR showed that glass plastics of the SVAM type can be used for supporting coal mines which could save great amount of wood and metal. These materials can also be used for the production of poles for high-tension transmission lines, building constructions and others.
3. Glass pipes which have a great resistivity against the action of many acids, alkalies, organic solvents and other liquids, can successfully replace pipes of nonferrous metals and alloyed steels. In the last years they were used in the assembling of hidden electrical lines in apartments and houses

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which saved many metal pipes . The Institute for Glass together with the Institute for Sanitary Engineering of the Academy for Building Activity and Architecture are carrying out experiments at present for using glass pipes for glass--concrete radiators in apartment houses. This would be a substitute for cast iron radiators and would save much metal.

4. Glass parcels consisting of two glass plates welded or stuck together, with hermetic and dehydrated air-interlayer which make it possible to save much wood in building windows.

5. Glass blocks produced at the Skopin glass factory (Ryazan' Council of National Economy) are 194 x 194 mm in size. They are used in house building.

6. Reinforced plane glass is produced in the Konstantinovka "Avtosteklo" factory, of the Gusev factory imeni Dzerzhinskiy.

7. Reinforced corrugated glass for roofs.

8. Patterned glass for doors and windows

9. Colored tiles of glass

10. Heat absorbing glass for window glass in the south of the country.

11. Building parts of glass in form of beams, gutters, angles

Glass for Housing and Industrial Purposes 72-58-5-3/18

and other profiles.
12. Foam glass for saving bricks.
There is 1 table.

AVAILABLE: Library of Congress

1. Building industry--USSR 2. Glass--Production

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